L 27949-66

ACC NR: AP6017707   SOURCE CODE: UR/0105/66/000/001/0085/0085

AUTHOR: Belimov, A. G.; Ikhteyman, F. M.; Kaporulin, K. N.; Kashkarov, G. E.;
Koval'chuk, P. A.; Levit, G. O.; Strelkovskiy, S. A.; Chernozubov, K. P.

ORG: none

TITLE: Professor A. K. Darmanchev (on his 70th birthday)

SOURCE: Elektrichestvo, no. 1, 1966, 85

TOPIC TAGS: electric engineering personnel, academic personnel, electric power plant,
electric motor

ABSTRACT: Aleksey Konstantinovich Darmanchev graduated from the electromechanical
faculty of the Leningrad Polytechnical Institute in 1925. He developed new rules
for the connection of asynchronous motors to power supplies and investigated the
loading conditions of power stations and systems between then and 1931. From
1935-1946, he was the head dispatcher of Lenenergo. He was the chief of the Moscow
Combined Dispatcher Administration of Central Power Systems in 1946-7. He has also
been active in higher education teaching, and is the author of an authoritative
book on operative control of power systems. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 10 / SUBM DATE: none

Card 1/1   BLG   UDC: 621.311.1

CHERNOV, L., Eng.

Tractors - Motors

Assembly and testing of engines with interchangeable crank bearing bushings. MTS 13,
No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

CHERNOV, L.

Discussing plans of a new type of mines. Ugol' 34 no.9:62 S '59.
(MIRA 12:12)
(Coal mines and mining)

CHERNOV, L.

Efficient work. Mashinostroitel' no.4:47-48 Ap '60.
(MIRA 13:6)

1. Predsedatel' soveta Nauchno-tekhnicheskogo obshchestva
Mashproma Gor'kovskogo zavoda frezernykh stankov.
(Gorkiy—Machine-tool industry—Technological innovations)

CHERNOV, L.

Improving the organizational work. NTO 3 no. 5:48-49 My '61.
(MIRA 14:5)

1. Predsedatel' Kurganskogo oblastnogo pravleniya Nauchno-
tekhnicheskogo obshchestva mashinostroitel'noy promyshlennosti.
(Kurgan Province—Technical societies)

SAPKO, A.I., kand.tekhn.nauk; CHERNOV, L.A., inzh.

    Design of the tilting arrangement on arc furnaces. Stal' 21
    no.12:1085-1087 D '61.   (MIRA 14:12)

    1. Dnepropetrovskiy metallurgicheskiy institut.
                 (Electric furnaces--Equipment and supplies)

CHERNOV, L.A.

Determination of tilting moments in electric steel smelting
furnaces. Izv.vys.ucheb.zav.; chern.met. 5 no.4:185-190 '62.
                                                    (MIRA 15:5)
1. Dnepropetrovskiy metallurgicheskiy institut.
                    (Electric furnaces)

KUZNETSOV, V. A.; CHERNOV, L. A.; SHARADIN, V. I.

"Experimental study of some methods of compensation of high excess reactivity."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-9 Sep 64.

CHERNOV, L. A.

   "Flow and Density of Acoustical Energy in a Moving Medium," Zhur. Tekh. Fiz., 16,
No.6, 1946.

Chair of Physics, XXXXX Yaroslav State Pedagogical Inst.

CHERNOV, L.A.

CHERNOV, L.A.

Kirchhoff's theorems in the acoustics of moving media. Trudy Kom.
po akust. no. 5:10-22 '50.   (MLRA 7:7)
    (Sound waves) (Mathematical physics)

CHERNOV, L. A.

"Scattering of Sound in Fluctuations," a report read at the conference of
the Acoustics Commission, AS USSR held in Leningrad 1-3 Feb 1951

W-21610, 25 Feb 52

CHERNOV L. A.

Aug. 51

USSR/Physics - Sound Scattering

"Sound Scattering in Dispersive Systems," V. K. Michurin, L. A. Chernov, Yaroslav State Pedagogic Inst imeni Ushinskiy, Chair of Therorethical Physics

"Zhur Tekh Fiz" Vol XXI, No 8, pp 920-926

Scattering of sound is produced by inhomogeneity of medium with density and compressibility varying irregulaly. Authoris computes coeff of sound dispersion in 2 cases: (1) density of particles condiderably exceeds that of filler; (2) compressiblility of particles is higher than that of filler. Submitted 31 Dec. 51.

PA. 149T95

CHERNOV, L. A.

USSR/Physics - Acoustics   FD-491

Card 1/1   : Pub. 146-8/18

Author   : Chernov, L. A.

Title   : Propagation of sound in a statistically inhomogeneous medium

Periodical   : Zhur, eksp. i teor. fiz., 24, 210-213, Feb 1953

Abstract   : Derives a differential equation for the function giving the angular
                   distribution of rays in a medium with random inhomogeneities. Obtains
                   formulas for the mean square of deviation of rays from the initial
                   direction. Indebted to N. N. Andreyev, L. M. Brekhovskikh and M. A.
                   Isakovich. 3 references

Institution   : Yaroslavl' State Pedagogical Institute

Submitted   : October 7, 1952

CHERNOV, L.A.

USSR/Physics - Wave propagation

Card 1/1   : Pub. 22 - 18/44

Authors   : Chernov, L. A.

Title   : Correlation of amplitude and phase-fluctuations of a wave propagating in a statistically non-homogeneous medium.

Periodical : Dok. AN SSSR 98/6, 953-956, October 21, 1954

Abstract   : Coefficients of correlation between amplitude and phase, and between amplitudes (or phases) of fluctuations of a wave propagated in a statistically non-homogeneous medium at a point of reception (or various points of reception) are sought. Three Russian references (1937-1953). Graphs.

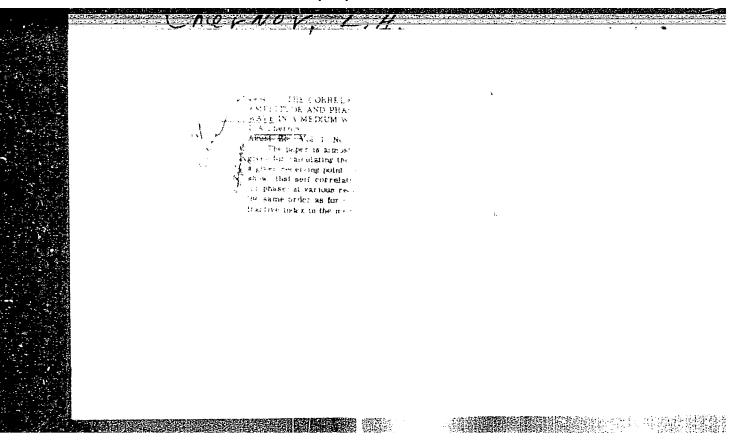Institution : Acoustical Institute of the Acad. of Scs. of the USSR

Presented by: Academician N. N. Andreev, May 25, 1954

CHERNOV, L. A.

CHERNCV, L. A.: "The distribution of waves in a medium with random heterogeneities".
    Moscow, 1955. Acad Sci USSR, Acoustic Inst. (Dissertation for the Degree of
    Doctor of Physicomathematical Sciences)

SO: Knizhnaya Letopis', No. 40, 1 Oct 55

CHERNOV, L.H.

THE CORRELA
AMPLITUDE AND PHA
PAGE IN A MEDIUM W
L. A. Chernov

The paper is some
for calculating the
a given receiving point
show that self correlat
of phase at various re
the same order as for
fractive index in the me

Chernov, L.A.

POLAND/Acoustics.   J

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10218

Author : Chernov, L.A.
Inst   : State Pedagogical Institute, Yaroslavl', USSR
Title   : Corellation Properties of a Wave in a Medium with Random Irregu-
           larities.

Orig Pub: Akust. zh., 1956, 2, No 2, 211-216

Abstract: Determination of the spatial and temporal auto-corellation fluc-
          tuations of level (and phase) at points located along the propa-
          gation of the wave (longitudinal autocorellation). It is pro-
          posed that random deviations of the index of refraction from its
          mean value are small, and that their scale is large compared with
          the wavelength; in addition, it is proposed that no regular inhomo-
          geneities are present in the medium.

          Assuming the expressions obtained by Obukhov (Referat Zhur Fizika
          1955, 8126) for the fluctuations of the phase and of the level of

Card   : 1/3

POLAND/Acoustics.

J

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10218

the wave passing through an inhomogeneous medium for a certain distance, and assuming that the coefficient of corellation of the fluctuations of the index of refraction has a gaussian form, the author obtains values for the coefficient of autocorellation of the level (R_1) and of the phase (R_S) in the form

$$R_c = R_s = \left[1 + (2 \Delta L / k a^2)^2 \right]^{-1}$$

where Δ L is the distance between receivers, and a the radius of the corellation of the index refraction. The expression given is real for a wave parameter $D >> 1$ and for Δ L $>>$ a. At a distance Δ L on the order of the radius a of corellation the fluctuations of the level and phase are fully corellated.

It is shown that the longitudinal corellation extends over a distance considerably greater than the transverse one. Later

Card   : 2/3

POLAND/Acoustics.

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10218

J

the author determines the temporal coefficient of autocorellation
of the levels (or phases) for a receiver moving with constant velo-
city, and explains the measurement data on the temporal autocorella-
tion of level fluctuations obtained by Mintzer (Abstract 10134).

Card   : 3/3

CHERNOV, L. A.

AUTHOR: Chernov, L.A.   46-2-13/23

TITLE: Correlation of the sound field fluctuations. (Korrelya-
          tsiya flyuktuatsiy polya)

ABSTRACT: The author seeks to establish analytically the relation
          between the correlation properties of field fluctuations to
          those of amplitude and phase. The analysis is made using the
          well known auto-correlation functions of amplitude and phase
          (1) and is restricted to the transversal correlation only.
          If the field is defined by the acoustical pressure p (say),
          then:

$$p = A_o \exp(L + iS) \qquad\qquad (1)$$

          where L and S are the level and phase fluctuations,
          respectively. If, at any two points, pressures are p_1 and
          p_2 , the correlation function of field fluctuations $^1 \Delta p_1$
          and Δp_2 will be determined by eq. (2), from which it may
          seem that the evaluation of the field correlation function
          reduces to the evaluation of the statistically mean value of
          the field $\bar{p}$ and of its correlation function $\overline{p_2 p_1}$. The

Card 1/3

Correlation of the sound field fluctuations. (Cont.)

value of $\bar{p}$ is given by eq. (6), where R_{ls} is the correlation factor between amplitude and phase. The correlation function is given by eq.(14), which for two coinciding points gives the mean square value of the wave amplitude:

$$\left|\bar{p}\right|^2 = A_o^2 \exp(2L^2) \qquad (15)$$

It follows from eq. (15) that, since the amplitude fluctuations increase, the total energy of the sound increases with distance. This is against the law of conservation of energy. The author assumes that this fallacy is due to the method of virtual displacements used to derive the basic equation (1) in which a plane wave propagation is considered in the first approximation, in which case the energy stays constant with distance. In an inhomogeneous medium the dispersion of the field energy increases and is superimposed on the primary field energy. Taking the above into account, the final expression for the correlation function becomes modified and is given in eq. (19). For small fluctuations eq.(19) takes a very simple form of eq.(20), which means that the correlation function of small field fluctuations

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Correlation of the sound field fluctuations. (Cont.)   46-2-13/23

is determined by the sum of auto-correlation functions of
amplitude and phase.
There is one Slavic reference.

ASSOCIATION: Yaroslavl Teaching Institute im. K.D. Ushinskiy.
               (Yaroslavskiy Pedagogicheskiy Institut im.K.D.
               Ushinskiy)

SUBMITTED: January 9, 1957.

AVAILABLE: Library of Congress
Card 3/3

CHERNOV, LA.

46-4-7/17

AUTHOR: Chernov, L.A.

TITLE: The Effect of Fluctuations on the Diffraction Image of a Focussing System (Vliyaniye flyuktuatsiy na difraktsionnoye izobrazheniye fokusiruyushchey sistemy)

PERIODICAL: Akusticheskiy Zhurnal, 1957, Vol.III, Nr 4, pp.550-555 (USSR)

ABSTRACT: Fluctuations in the amplitude and phase of an incident wave lead to fluctuations in the diffraction image produced by a focussing system. Because of this, one observes deviations of intensity from the mean distribution, and the mean distribution itself depends on the fluctuations in the incident wave. In connection with this phenomenon the following two problems arise in the theory of focussing systems: (1) the determination of the mean distribution in the diffraction picture, and (2) the determination of the distribution of fluctuations in it. According to the present author, none of these problems have been studied so far. Krasil'nikov and Tatarskiy (Ref.1) considered the problem of small fluctuations in the focus of the objective. Their formulae may be obtained as special cases of the general theory now given. The above two problems are considered in detail in the present paper quite generally without the

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46-4-7/17

The Effect of Fluctuations on the Diffraction Image of a
Focussing System.

limitation on the size of the fluctuations and assuming
that the fluctuations in the incident wave are due to large
scale nonuniformities in the medium. If the distribution
of fluctuations in the level L and phase fluctuations S
are known on the surface of a sphere behind a lens then
Debye's formula (Ref.2):

$$ p = \frac{iA_o}{\lambda F} \exp(-ikF) \int \exp (L + iS).\exp \left(ik\frac{Fr}{F} \right) ds \ , \quad (1) $$

may be used, where A_o is the amplitude of the incident
wave and λ is the wavelength. In this formula the origin
of co-ordinates is at the focus, the position of the
element ds on the surface of the sphere is determined by
the vector F and the position of the point of observation
is given by the vector r . The treatment is limited to
paraxial lenses. It is assumed that the distribution of

Card 2/3

The Effect of Fluctuations on the Diffraction Image of a Focussing System.

level and phase fluctuations on the outgoing spherical surface is the same as the distribution in the incoming plane surface, i.e., the distribution in the incident wave. General formulae are obtained which give the mean distribution of intensity in the diffraction picture and the distribution of fluctuations. The special cases of small and large fluctuations are considered and the quantitive results of the theory are in good agreement with the work of Dunchon and Hude (Ref.6). The fluctuations of amplitude and phase at the focus are found to be identical with the results of Krasil'nikov and Tatarskiy (Ref.1). There are 5 Russian references and 1 German.

ASSOCIATION: **Yaroslavl'** Pedagogical Institute im. K.D.Ushinskiy (Yaroslavskiy Pedagogicheskiy institut im. K.D.Ushinskogo)

SUBMITTED. January 9, 1957.

AVAILABLE: Library of Congress.

Card 3/3   1. **Fluctuation effects-Analysis**   2. **Mathematics-Theory**

PHASE I BOOK EXPLOITATION   842

Chernov, Lev Aleksandrovich

Rasprostraneniye voln v srede so sluchaynymi neodnorodnostyami (Wave Propagation in a Medium With Random Inhomogeneities) Moscow, Izd-vo AN SSSR, 1958. 158 p. 3,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Akusticheskiy institut.

Resp. Ed.: Isakovich, M.A.; Ed. of Publishing House: Shmidt, V.V.; Tech. Ed.: Polyakova, T.V.

PURPOSE: This book is intended for scientists working in acounstics, optics, and radiophysics.

COVERAGE: The author discusses the theory of wave propagation in a medium with random inhomogeneities. The book is divided into three parts. In the first part the problem of wave propagation is examined in radiant approximation. In the second part the author explains the diffraction theory of wave propagation. In the third part the author examines the effect of fluctuation in the incident wave on the diffraction image of the focusing system. This is

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Wave Propagation in a Medium (Cont.)   842

of special importance in the field of hydroacoustics and astromonical optics. Some theoretical inferences are backed with experimental data. The more difficult calculations are worked out in supplements included at the end of the book. The author gives recognition to the valuable help given him by L.M. Brekhovskikh, Corr. Member, Academy of Sciences of the USSR, and Professor G.S. Gorelik (deceased). There are 61 references of which 41 are Soviet.

TABLE OF CONTENTS:

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Wave Propagation in a Medium (Cont.)   842

PART II. DIFFRACTION THEORY

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Wave Propagation in a Medium (Cont.)   842

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Wave Propagation in a Medium (Cont.)   842

PART III. THE EFFECT OF FLUCTUATION OF THE DIFFRACTION
IMAGE OF THE FOCUSING SYSTEM

AVAILABLE: Library of Congress
Card 5/5

BK/sfm
12-9-58

CHERNOV, L. A.

"The Effect of Fluctuations on the Diffraction Image."

report presented at the 6th Sci. Conference on the Application of Ultrasound in the Investigation of Matter, 3-7 Feb 1958, organized by Min. of Education RSFSR and Moscow Oblast Pedgogic Inst. im. N. K. Krupskaya.

CHERNOV, L. A.
KROMM, M. N. and CHERNOV, L. A.

"Diffraction Image Dependence on the Value of Fluctuations in the Incident Wave."

paper presented at the 4th All-Union Conf. on Acoustics, Moscow, 26 May - 4 June 58.

CHERNOV, L. A. and SHIROKOVA, T. A.

"Normalized Wave-Field in a Randomly Inhomogeneous Medium."

papper presented at the 4th All-Union Conf. on Acoustics, Moscow, 26 May - 2 Jun 58.

AUTHOR: Chernov, L.A.   SOV/46-4-4-1/20

TITLE: Acoustics of a Moving Medium. Review. (Akustika dvizhushcheysya sredy. Obzor.)

ABSTRACT: Acoustics of moving media deals with propagation of sound in a moving medium as well as with emission and reception by or from moving sources and receivers. The present review does not claim completeness and reflects personal interests of the author. He discusses Stokes', Rayleigh and Emden's work (Refs 1-3) on the effect of wind on propagatio of sound in air. Emden suggested that one should distinguish between the direction of an acoustic ray and the direction of a normal to the wave-front. This makes the problem of sound propagation in the presence of winds similar to the propagation of light in crystals. Hamilton's methods used in optics may be applied in acoustics, as shown by the present author (Ref 5). The present author (Ref 6) discussed, in ray approximation, the principle of reciprocity in the acoustics of moving media. The equation of the wave-front may be obtained in various ways. A simple method of deducing the ikonal equation was

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Acoustics of a Moving Medium. Review.

SOV/46-4-4-1/20

given by Kernhauser (Ref 7). Hadamard (Ref 7) showed that surfaces of small discontinuities satisfy the ikonal equation. This was confirmed in the work of Chibisov (Ref 9) who gave the theoretical basis of acoustic studies of the atmosphere. Recently Heller (Ref 10) also discussed the problem of propagation of discontinuities in a moving non-uniform liquid medium for the case when dis.ontinuities occur in the first derivatives of pressure, density and velocity, all with respect to time. When the principles of geometrical acoustics are no longer applicable, the required equations may be obtained by the method of small perturbations applied to the equations of hydrodynamics, as shown by Andreyev and Rusakov (Ref 11). The equations of the acoustic of non-uniform moving media were given in their most general form by Blokhintsev (Refs 12, 13) by applying the method of small perturbations to the equations of motion of a viscous liquid. General formulae for the energy and energy flux densities in a moving medium were given in the ray approximation by the present author (Ref 14). Kirchhoff's theorem, as applied to problems of propagation of sound, was given in a more general form by Blokhintsev (Ref 13) and the present author (Ref 15). The review deals also briefly with the following subjects: scattering of sound waves (Refs 16-18) and of shock waves (Ref 19)

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Acoustics of a Moving Medium. Review.   SOV/46-4-4-1/20

on turbulences; generation of sound by fluctuations and turbulences
(Refs 20-22); propagation of sound in turbulent media (Refs 23-28);
moving sound sources (Refs 29-30) and airscrews (Refs 31-32); sound
emission by a flat plate (Refs 33), by an ellipsoid of revolution
(Ref 34) and by a vibrating cylinder (Ref 35); "infrasound" (6-13 c/s)
discovered in seas (Refs 36-37); generation of sound in turbulent
flow round bodies (Refs 13, 38); excitation of a resonator by an air
stream (Refs 13, 39); sound receivers in a moving medium and their
protection from winds (Ref 40). There are 40 references, 26 of which
are Soviet, 5 English, 5 American, 2 French, 1 German and 1 translation.

ASSOCIATION: Yaroslavskiy gosudarstvennyy pedagogicheskiy institut im. K.D. Ushinskogo
         (Yaroslavl' State Pedagogical Institute imeni K.D. Ushinskiy)

SUBMITTED: May 29, 1957.
Card 3/3

AUTHORS: Krom, M.N. and Chernov, L.A.   SOV/46-4-4-7/20

TITLE: Effect of Fluctuations in an incident Wave on the Distribution of
Mean Intensity Near the Focus of a Lens (Vliyaniye flyuktuatsiy v
padayushchey volne na raspredeleniye sredney intensivnosti vblizi
fokusa linzy)

PERIODICAL: Akusticheskiy Zhurnal, 1958, Vol 4, Nr 4, pp 341-347 (USSR)

ABSTRACT: In acoustical and astronomical observations the presence of amplitude
and phase fluctuations in the incident wave affects the diffraction image
of a focusing system. It is found that the diffraction intensities
fluctuate and the diffraction image itself depends strongly on the
magnitude of fluctuations in the incident wave. The relationship
between the quality of the diffraction image and the atmospheric
turbulence is given in the form of an empirical table in Ref 1.
Theoretical investigation of dependence of the mean distribution of
intensities near the focus of an objective on the fluctuations in the
incident wave was first discussed in a paper by Chernov (Ref 2).
Chernov dealt with the case when fluctuations in the incident wave
are due to passing of this wave through a medium with large-scale
statistical variations of the refractive index. The lens in question

Card 1/2

Effect of Fluctuations in an Incident Wave on the Distribution of Mean Intensity
Near the Focus of a Lens

SOV/46-4-4-7/20

was taken to be an aberrationless objective which transforms a plane
wave into a convergent spherical wave. It is assumed that this
objective does not introduce any changes in the distribution of
fluctuations along the wave-front.   Mathematical difficulties
encountered by Chernov in dealing with this problem forced him to limit
himself to the cases of very small and very large fluctuations in the
incident wave. In practice the most common case is that of fluctuations
which are neither very small nor very large. The present paper is a
continuation of Chernov's work (Ref 2) and it gives, in the form of a
series, the distribution of the mean intensity near the focus of the
objective described above for fluctuations of arbitrary amplitude in
the incident wave. At the focus dependence of the mean intensity on
fluctuations is found in the closed form. The results are shown graphically.
There are 4 figures and 5 Soviet references.

ASSOCIATION: Yaroslavskiy gosudarstvennyy pedagogicheskiy institut im. K.D.Ushinskogo
(Yaroslavl' State Pedagogical Institute imeni K.D. Ushinskiy)

SUBMITTED: October 27, 1957

Card 2/2

GERASIMOV, V.G.; SHKARLET, Yu.M.; CHERNOV, L.A.

Apparatus for the separate control of the diameter and permeability of ferromagnetic cylinders. Zav.lab. 29 no.4:497-499 '63.
(MIRA 16:5)

1. Moskovskiy energeticheskiy institut.
(Magnetic materials)

GERASIMOV, V.G.; CHERNOV, L.A.

Theoretical and experimental investigation of certain transducer types. Defektoskopiia no. 5:47-57 '65   (MIRA 19:1)

1. Moskovskiy energeticheskiy institut.

CHERNOV, L.A.

Stability of electric steel smelting arc furnaces. Izv.vys.ucheb. zav.; chern.met. 8 no.5:78-82 '65.

(MIRA 18:8)

1. Dnepropetrovskiy metallurgicheskiy institut.

CHERNOV, L.B., inzhener.

Ways to increase the lifetime of split sliding friction bearings.
Vest. mash. 33 no.12:20-23 D '53.   (MLRA 6:12)
                                        (Bearings (Machinery))

ONGLANOV, L. B., (Engr)

Dissertation: "Technological Means of Increasing the Life of the Crankshaft Bearings of the KDM-46 Engine." Cand Tech Sci, Joint Sci Council of the All-Union Sci Res Inst of Mechanization of Agriculture and the All-Union Sci Res Inst of Electrification of Agriculture, 11 May 54. Vechernyaya Moskva, Moscow, 2 May 54.

SO: SUM 284, 26 Nov 1954

CHERNOV, L.B.

Thick-walled interchangeable bearing bushings. Avt.trakt.prom.
no.10:16-17 O '54.   (MLRA 7:10)

1. Chelyabinskiy traktornyy zavod.
        (Automobiles--Engines)

CHERNOV. L. B. Cand Tech Sci -- (diss) "Study of the effect of design, technology of production, and repair upon the durability of bearings of KDM-46 motors." Mos, 1955. 19 pp (Mos Inst of Mechanization and Electrification of Agriculture im V. M. Molotov), 130 copies (KL, 13-58, 98)
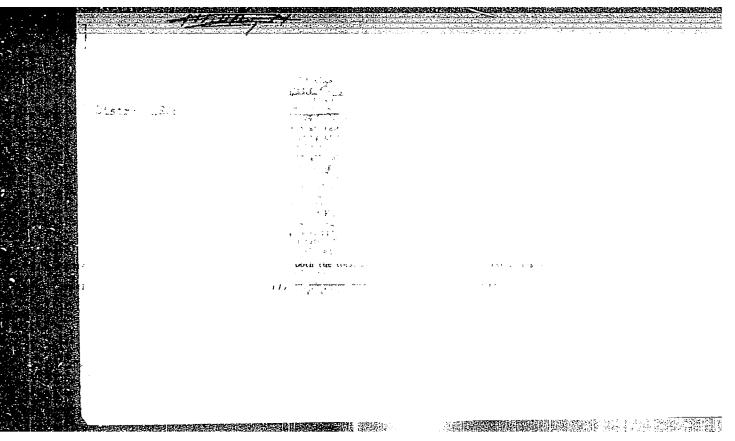
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CHERNOV, L.B., kand.tekhn.nauk

New trends in designing industrial plants for serial production.
Mashinostroitel' no.7:37 '61.   (MIRA 14:7)
(Industrial management)

CHERNOV, L.F.

129-10-2/12

AUTHOR: Prosvirin, V.I., Professor of Technical Sciences, Doctor, and Chernov, L.F., Engineer.

TITLE: Certain features of changes in the properties of the austenitic steel 10X25H20. (Nekotoryye osobennosti izmeneniya svoystv austenitnoy stali 10X25H20)

ABSTRACT: A change in the properties of this austenitic steel is known to be due to secondary-phase transformations. It is also known that this steel can exist in the single phase and in the 2-phase state. During its decomposition, the solid solution evolves a carbide of the type $Me_{23}C_6$ but it was not known that (for this steel) very interesting phenomena can be observed which are associated with changes of certain properties and of the structure. The graph, Fig. 1, gives the dependence of the austenite grain size on the annealing duration for the temperatures 1 200 and 1 300 C; the graph, Fig.2, gives the characteristic of dispersion hardening as a function of the temperature and the duration of the annealing; the graph, Fig. 3, gives the dependence of the dispersion hardening on the duration of the annealing after long duration ageing at

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129-10-2/12

Certain features of changes in the properties of the
austenitic steel 10X25H20. (Cont.)

750 C; the graph, Fig. 4, gives the depedence of the dispersion
hardening during stepwise heating; the graph, Fig. 5, shows
the changes in the mechanical properties of the steel after
various heat treatment regimes; the graph, Fig. 6, gives the
influence of the heat treatment on the development of thermal
brittleness at 650 C; the graph, Fig. 7, gives the influence
of heat treatment on the development of thermal brittleness
at 700 C; the graph, Fig. 8, gives the change in the impact
strength after heating at 650 C as a function of the tempering
regime. On the basis of the results in the here described
experiments, it was found that changes in the properties of
the steel 10X25H20 during heating were due to secondary phase
formation and concentration of these phases along the grain
boundaries. The character of the embrittlement is determined
by the degree of saturation of the solid solution (austenite).
If the saturation of the austenite is considerable, heating to
750 C brings about an appreciable formation of secondary
phases and a continuous decrease of the impact strength of the
steel. In the case of slight over-saturation of the austenite
(by preliminary heat treatment) heating to 650-700 C does not
Card 2/4   produce appreciable evolution of these phases but the brittle-

Certain features of changes in the properties of the
austenitic steel 10X25H20. (Cont.)

ness of the steel can change within wide limits in accordance
with a peculiar relation. The impact strength during isothermal
heating at 650 C increases periodically after an initial
decrease. Phase and electron-microscopic analysis has shown
that maximum ebrittlement of the steel after long duration
heating corresponds to the instant of appreciable formation of
secondary phases along the grain boundaries. During long
duration heating (8 000 hours) σ-phase forms predominantly
along the grain boundaries. Secondary phase formation produces
interesting changes in the dispersion hardening of the austenite;
the characteristic of the dispersion hardening changes in its
initial period as a function of the temperature and the duration
of the high temperature heating. Thus, for instance, increase
in the hardness during the first hours of heating at 650 and
750 C is considerably higher after a very long heating or heating
at a very high temperature. Dispersion hardening does not
equalise the differences in hardness of the coarse grain and
fine grain austenite. Long duration high temperature heating
at 1 300 C produces less stable hardening during decomposition,
characterised by periodic softening of the austenite in the case
Card 3/4 of stepwise heating (tempering). Such unstable hardening can

129-10-2/12

Certain features of changes in the properties of the
austenitic steel 10X25H20. (Cont.)

be associated with the formation of dimensionally less uniform
crystallites of the secondary phase which bring about softening
due to coagulation. Embrittlement of the coarse grain austenite
takes place more intensively than that of fine grain austenite;
this difference is applicable only in the initial period of
heating. Formation of secondary phases brings about embrittle-
ment of the steel and leads to interesting relations in the
changes of the strength and the ductility characteristics of
the steel. Coarser austenitic grain increases the toughness of
the steel but reduces its ultimate tensile strength and yield
point at any hardness value. The ductility characteristics
(δ and ψ) are more sensitive to structural changes than σ_b and
σ_s and depend on the dimensions of the austenite grain, the
character of the dispersion hardening and the features of the
boundary zone. There are 9 figures, 2 tables and 2 Slavic
references.

ASSOCIATION: TsNIITMASh
AVAILABLE: Library of Congress

Card 4/4

Certain peculiarities of
mass of R[0730rimal.
French workingprocess
of this steel, contg. C
Ni 10.85, W 8.5, Co
0.0.5%, quenched
for up to 3000
strengths, and
ment carried
800-1100° occ.
impact strength
temps, with a
yield pe
able, 142

CHERNOV, L.F., Cand Tech Sci--(diss/ " Study of thermal friability of austenitic steels." Mos, 1958. 16 pp (Main Sci Res Project under Gosplan USSR. Central Sci Res Inst of Technology and Machine Building TsNIITMash), 120 copies (KL,24-58, 121)

glavniiproyekt

-70-

SOV-129-58-6-3/17

AUTHORS: Prosvirin, V. I. (Dr.Tech.Sci.Prof.), Chernov, L.F.
(Engineer)

TITLE: Change of Certain Properties of the Steel EI612 as a
Function of the Degree of Decomposition of the Austenite
(Izmeneniye nekotorykh svoystv stali EI612 v zavisimosti
ot stepeni raspada austenita)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 6,
pp 10-14 (USSR)

ABSTRACT: The results are described of the study of certain pro-
perties of steel EI612 as a function of the temperature and
duration of heating. The investigated steel contained 0.10%
C, 14.3% Cr, 35.8% Ni, 2.6% W, 1.4% Ti and 0.37% Al. The
change in the austenite grain size of this steel and the
hardness as a result of one hour's heating at various tem-
peratures is graphed in Fig.1. In Fig.2 the changes are
graphed in the hardness and the impact strength of hardened
steel EI612 as a function of the heating duration at 750°C.
In Fig.3 the changes are graphed of the impact strength of
the tested steel as a function of the duration of the heating
at various temperatures between 650 and 1000°C. In Fig.4
the changes are graphed of the properties of the investi-
Card 1/3 gated steel in the hardened state during heating at 750°,

SOV-129-58-6-3/17

Change of Certain Properties of the Steel EI612 as a Function of the Degree of Decomposition of the Austenite.

800° and 650°C. Fig.5 shows the changes in the percentual content of the secondary phases as a function of the duration of the heating at 750°C. The following conclusions are arrived at: (1) The most intensive embrittlement of the tested steel in the hardened state at all the test temperatures took place during the first one to two hours of heating. This is attributed to the greater inclination of the grain boundaries to develop brittle failures when filled up even with small quantities of secondary phases. (2) For relatively high heating temperatures of the steel an intensive decrease of the impact strength during the first hour is superseded by a rise in the case of heating of longer duration. This increase in the impact strength will occur faster at higher temperatures (1000-850°C). At 750-800°C a stabilisation takes place of the values of the impact strength at the relatively high level of 16-18 kg/cm^2.

Card 2/3

Change of Certain Properties of the Steel EI612 as a Function of the Degree of Decomposition of the Austenite.

(3) The secondary phases which separate out of the solid solution of the tested steel at 750°C appear to be the phases Ni_3(Al, Ti) and TiC. (4) The temperature brittleness which developes in the case of disperse decomposition of the austenite is accompanied by changes in the strength and the plastic properties of the tested steel. The lower the heating temperature which brings about a decomposition of the austenite, the more pronounced will be the change in the properties of the steel. In this case (decomposition at 650°C), an appreciable increase in the hardness and strength and a decrease in plasticity take place in addition to a decrease of the impact strength. (5) Development in the steel of temperature brittleness is accompanied by a change in the micro structure which can be detected at large magnifications. The fact that the material gets out of the brittle state is attributed to coagulations of the α'-phase. There are 5 figures and 2 tables.

ASSOCIATION: TsNIITMASh

Card 3/3

1. Steel - Properties   2. Austenite - Decomposition
3. Austenite - Temperature effects   4. Steel - Test methods

38981
S/137/62/000/006/120/163
A052/A101

Э 6. 2/.20

AUTHOR: Chernov, L. F.

TITLE: Investigation of properties of the metal of ЭГТУ-700 (EGTU-700) gas turbine rotor after 24,000 hours' service

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1962, 55 - 56, abstract 61327 (V sb. "Konstruir. i tekhnol. mashinostr." Moscow-Kiyev, Mashgiz, no. 1, 1961, 255 - 260)

TEXT: The investigated rotor, representing a welded construction of three components, is made of ЭИ405 (EI405) steel of the following composition (in %): 0.11 C, 0.82 Mn, 0.62 Si, 0.23 P, 0.03 S, 14.63 Cr, 12.7 Ni, 2.33 Mo, 1.6 Nb, 0.11 N. Before the service the rotor was heat-treated under following conditions: 1.5 hour water hardening at 1,170°C, 24 hour tempering at 780°C and, after machining, stabilizing (12 hour heating from 200°C to 750°C, 20 hour holding at 750°C and 16 hour air cooling). The results of the investigation of properties of the metal after 24,000 hours' service are presented and these properties are compared with the properties of the metal of the rotor in the initial

Card 1/2

Investigation of...

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A052/A101

state. In the process of a continuous service a dispersion decomposition of the solid solution (precipitation of $Me_{23}C_6$) of EI405 steel took place which resulted in a change in the structure and properties of the rotor disk metal. As a result of structure changes in the process of rotor disk service during 24,000 hours at 630°C, an embrittlement of the metal took place which led to a considerable decrease of a_k (from 10 to 3.6 kgm/cm^2). At a low a_k value, the indices of ductility at a long-time breaking are higher than in the initial state, although the time spans until the rupture of rotor disk metal samples before and after the service are close to each other.

T. Rumyantseva

[Abstracter's note: Complete translation]

Card 2/2

39657
S/137/62/000/007/050/072
A057/A101

/8.8/00

AUTHOR: Chernov, L. F.

TITLE: The effect of the method of thermal treatment upon some properties
            of heatproof steels

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1962, 58, abstract 71356 -
            ,(In collection "Konstruir. i tekhnol. mashinostr.", no. I, Moscow-
            Kiyev, Mashgiz, 1961, 261 - 267)

TEXT: The effect of two variants of thermal treatment upon the properties
of heatproof steels of two types with the composition (in %): ЭИ 673 (EI673) -
C 0.13, Cr 19.5, Ni 19.8, W 2.5, Mo 3.2, Co 19.05 and ЭИ 612 (EI612) - C 0.010,
Cr 14.3, Ni 35.8, W 2.6, Al 0.37 was investigated. The first variant consists of
hardening from 1,200°C in oil with subsequent tempering at 650, 700, 750, and
850°C. In the second variant the steel is heated to the hardening temperature
(1,200°C) and subsequently cooled to the temperature of isothermic soaking (at
650, 750, 850°), at which the steel is held for a certain time. The investigation
demonstrated that in case of the first variant of thermal treatment notch tough-
ness a_n changes in dependence on the temperature of heating, at a constant dura-

Card 1/2

The effect of the method of thermal treatment upon...

tion of heating, yielding a minimum which is displaced towards lower temperatures with increasing duration of heating. For example, the minimum value a_n is at $850^\circ C$ when the duration of heating is 5 hrs, while for 500 hrs it is at $800^\circ C$. In the second variant of thermal treatment a_n is not very sensitive to the temperature of austenite decomposition. The value of a_n remains practically constant for all holding times within the range $700 - 850^\circ C$.

A. Babayeva

[Abstracter's note: Complete translation]

Card 2/2

S/123/62/000/015/006/013
A052/A101

AUTHOR: Chernov, L. F.

TITLE: The effect of the method of heat treatment on some properties of
              refractory alloys

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 15, 1962, 18, abstract
              15B113 (In collection: "Konstruir. i tekhnol. mashinostr.". Mos-
              cow-Kiyev, Mashgiz, no. I, 1961, 261 - 267)

TEXT: Comparative characteristics of impact toughness of ЭИ-673 (EI-673)
and ЭИ-612 (EI-612) refractory steels at an ordinary and isothermal hardening
are presented. After hardening at 1,200°C, tempering at 650 - 1,100°C or iso-
thermal aging at 650 - 850°C a different character of the change of impact tough-
ness is observed. At an ordinary heat treatment of EI-673 steel distinctly
pronounced minima are observed on the impact toughness curves as a function of
the tempering temperature; these minima shift towards lower temperatures when
the holding increases. At the isothermal treatment of EI-673 steel the impact
toughness has close values in the 650 - 850°C range and in the case of EI-612

Card 1/2

The effect of the method of...

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steel in the 650 - 750°C range. A study of the secondary phase formation at an ordinary and isothermal hardening did not detect any noticeable difference between them, consequently, structural changes at the isothermal decomposition of austenite can be detected only by means of impact toughness.

V. Stasevich

[Abstracter's note: Complete translation]

Card 2/2

CHERNOV, L. I.

Category : USSR/Solid State Physics - Mechanical Properties of Crystals and   E-9
           Polycrystalline Compounds

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 3986

Author   : Prosvirin, V.I., Chernov, L.I.
Title   : Kinetics of Thermal Brittleness in Certain Austenitic Steels

Orig Pub : Issledovaniya po zharoprochnym splavam. M., AN SSSR, 1956, 76-83

Abstract : The thermal brittleness of austenitic steel, connected with changes in
           the composition of the secondary phases, manifests itself both in the
           period of preparation of the alloy for use (during the tempering period),
           as well as during the process of subsequent heating at working tempera-
           tures. The development of thermal brittleness depends on the temperature
           and on the soaking time during the hardening and tempering. An inves-
           tigation confirms the hypothesis that the properties of chrome-nickel
           austenitic steel supplementary alloyed with strong carbide-forming elem-
           ents are quite unstable at working temperatures. In spite of the higher
           tempering, carried out in the 700 -- 800° range, the ultimate strength,
           the yield point, and particularly the impact viscosity, change to a con-
           siderable degree in the subsequent lower heating temperature (at the
           working conditions and conditions close the them).
Card   : 1/1

ACCESSION NR:

AUTHOR: Abdurhan..ov, Sh.; Belen'k   va,

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... and photoemuls

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...generated by p-
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irradiated in the ?BPS accelerator .
... and the efficiency close :
measured by the quantity x = log|ta-
proton and nucleon co..isions (nuc.

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... azimuthal dist...
... ... by the authors
... spatial and ... distribution...
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... ... formulas

... Institut yadernoy f...
(SSSR)

SUBMITTED: ...

... REF SOV: ...

... 2 2

CHERNOV, L.Ya., inzh.; GENDLER, A.Kh., inzh.

Using polymer materials for the reparation of defects in
castings. Mashinostroenie no. 2:44-46 Mr-Ap '64.
                                        (MIRA 17:5)

CHERNOV, L.Ya., inzh.; GENDLER, A.Kh., inzh.

Capron worm gear for a reductor. Mashinostroenie no.2:14-16
Mr-Ap '65.   (MIRA 18:6)

COUNTRY   : BOOK
CATEGORY   : Farm Animals.   Q
                Cattle.
ABS. JOUR.   : RZhBiol., No. 3, 1959, No: 11992

AUTHOR   : Chernov, N.
IN .   : Volinskaya Oblast' Society for the Spread of*
TITLE   : Preparing Heifers Before Parturition and the
                Milk Yield in Heifers Calving for the First
                Time.
ORIG. PUB.   : Byul. sil'skogospod. inform. Volims'ke obl.
                vid. t-va poshir. Polit. i nauk. znan', 1957**
ABSTRACT   : The experiments were carried out at the farm
                of Askania Nova Institute in 1955. The heifers
                being identical in breed and age (16-18 months),
                were divided into three groups. The udder of
                the 1st group heifers (8 heads) was massaged
                three times daily for 6-7 months; 2-3 months
                before parturition the massage was discon-
                tinued. In the 2nd group, massaging was appli-
                ed beginning from 7-8 month of pregnancy and
                was terminated 10-15 days before parturition;
                in the 3rd group (control) massaging was not

Card: 1/3
                   *Political and Natural Science, Askania
                   Nova Institute.

COUNTRY   : USSR
CATEGORY   :

ABS. JOUR.   : RZhBiol., No.   1959, No.

AUTHOR   :
INST.   :
TITLE   :

ORIG. PUB.   :

ABSTRACT   : performed. The experimental animals were kept
                under the same feeding and keeping conditions.
                It was established that the live weight of
                animals of the 1st and 2nd groups was 64.1 kg,
                their annual milk yields 18.3-18.8 percent
                higher than of controls. In the 1st group the
                milk's fat content was 0.22 percent and in the
                2nd 0.13 percent higher than in controls. In
                the heifers of the 1st and 2nd groups, which
                calved for the first time, milking was finished

CARD: 2/3
                    ***No 2, 14-17

                         25

STANKOV, S.; TROFIMOV, V.; VVEDENSKIY, A.; SVIRIDOV, A., inzh. vodnogo
   transporta; CHERNOV, M., inzh. vodnogo transporta

Improve the management of the consolidated inland waterway
network. Rech. transp. 24 no.10:1-3 '65.   (MIRA 18:12)

1. Nachal'nik Glavnogo upravleniya rechnogo flota pri Sovete
Ministrov KazSSR (for Stankov). 2. Nachal'nik Kamskogo rechnogo
parokhodstva (for Trofimov). 3. Nachal'nik Severnogo rechnogo
parokhodstva (for Vvedenskiy).

CHERNOV, M

CH

VOperation of the expeller press "EP." M. Chernov.
Myasnaya Ind. S.S.S.R. 27, No. 1, 19-20(1958).—This
expeller press has a shaft contg. 4 stages of different diams.
The diam is large at the inlet, smallest in the next stage,
followed by 2 stages of increasing diams. Its operation for
the pressing of cracklings is described.   M. M. Piskur

CHERNOV, M., inzh.; IVANOV, L., inzh.

Expand the use of vessels with underwater wings. Rech. transp.
20 no. 2:7-10 F '61.   (MIRA 14:2)
                          (Planing hulls)

CHERNOV, M.

All citizens should be familiar with traffic regulations. Avt.
transp. 39 no.3:45 Mr '61.   (MIRA 14:3)
            (Traffic regulations)

NAYDENKO, K., inzh.; CHERNOV, M., inzh.

Objectives in ship repairing for 1961/62. Rech. transp. 20 no.9:
11-12 S '61.   (MIRA 14:9)
                    (Ships--Maintenance and repair)

CHERNOV, M., podpolkovnik

By their own efforts. Tyl.i snab.Sov.Voor.Sil 21 no.5:83 My
'61.   (MIRA 14:8)
   (Automobiles, Military--Maintenance)

CHERNOV, M., inzh.

A valuable textbook. Reoh. transp. 24 no.3:60 '65.

(MIRA 18:5)

KLOTS, P., inzh. (Perm'); FEDOTOV, P., deputat gorodskogo Soveta (Rybinsk, Yaroslavskoy obl.); DANILINA, K.; CHERNOV, M.

Accounts of progressive practices in house committees. Zhil.-kom.-khoz. 12 no.7:10-11 Jl '62.
(MIRA 16:5)

1. Zaveduyushchaya detskim sektorom obshchestvennogo domovogo komiteta domoupravleniya No.2, g. Artemovsk, Donetskoy obl. (for Danilina). 2. Glavnyy inzh. zhilishchno-ekspluatatsionnoy kontory No.17 Leningradskogo rayona Moskvy (for Chernov).
(Apartment houses)

CHERNOV, M., inzh.

Improve the level of training and research work. Rech. transp.
22 no.8:8-9 Ag '63.   (MIRA 16:10)

(Inland navigation—Study and teaching)
(Research, Industrial)

CHERNOV, M.F.

USSR/Chemical Technology. Chemical Products and Their   I-14
       Application--Treatment of natural gases and
       petroleum. Motor fuels. Lubricants.

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 9364

Author   : Dmitriev, P. P., Ryabova, N. D., and Chernov, M. F.
Inst   : Academy of Sciences Uzbek SSR
Title   : The Preparation of Sulfofrezol from Southern
           Uzbekistan Crude

Orig Pub: Izv. AN UzSSR, 1956, No 3, 67-71 (Uzbek summary)

Abstract: Termez crudes (TC) from southern Uzbekistan are
           characterized by high gum, S, and paraffin con-
           tents and a small yield of light fractions; the
           oil fractions are unstable even after extensive
           treatment. The S compounds in the oil fractions
           of TC have cyclic structures which considerably
           complicates sulfur removal. The authors have
           investigated the possibility of producing sulfo-
           frezol (a lubricating-cooling oil used in metal

Card 1/2

USSR/Chemical Technology. Chemical Products and Their   I-14
        Application--Treatment of natural gases and
        petroleum. Motor fuels. Lubricants.

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 9364

Abstract: cutting) from the TC fractions; the presence of
           S in these oils gives the latter pronounced
           surface active properties. It is shown that a
           7 : 30 mixture of the 400-450° (24.8 cs at 50°)
           and 400° (13.2 cs at 50°) fractions from which
           paraffin hydrocarbons have been removed will
           have a viscosity of 22.6 cs, a sulfur content of
           3.8%, a pour point of -14° and meets in all other
           respects the specifications of USSR Standard
           122-46 for sulfofrozols. In contrast to the com-
           mercial product, sulfofrezol prepared from TC does
           not corrode a copper plate; the latter effect is
           explained by the nature of the S compounds con-
           tained in the sulfofrezol. Preliminary tests on
           the sulfofrezol in the machining os steels and
           brass have shown the complete absence of any
           corrosive effects.
Card 2/2

KHODZHAYEV, G.Kh.; DMITRIYEV, P.P.; OSIPOVA, M.I.; CHERNOV, M.F.;
    BRAUDE, A.N.; MAT'YAKUBOV, D.; SAMATOV, A.; SAMSONOVA, L.M.

Petroleum from Khartum fields. Uzb.khim.zhur. no.1:71-77 '59.
                                        (MIRA 12:6)

1. Institut khimii AN UzSSR.
                (Fergana—Petroleum—Analysis)

DMITRIYEV, P.P.; USACHEV, V.V.; CHERNOV, M.F.

Some considerations concerning the formation and decomposition of a carbamide complex. Uzb.khim.zhur. .no.6:74-82 !59.   (MIRA 13:4)

1.Institut khimii AN UzSSR i Ferganskiy neftepererabatyvayushchiy zavod.
        (Urea)   (Hydrocarbons)

KHODZHAYEV, G.; ZEMLINSKIY, E.Ye.; CHERNOV, M.F.; KVASNIKOVA, K.A.;
KUL'METOV, A.; TSAPENKO, M.N.; USMANOVA, D.A.

Petroleums of the Yuzhnyy Alamyshik field. Uzb. khim. zhur. no.1:
55-64 '61.   (MIRA 14:1)

1. Institut khimii AN UzSSR.
(Yuzhnyy Alamyshik--Petroleum)

S/081/62/000/001/046/067
B158/B101

AUTHORS: Khodzhayev, G., Zemlinskiy, E. Ye., Chernov, M. F., Usmanova, Kvasnikova, K. A., Kul'metov, A., Tsapenko, M. N.,
D. A.

TITLE: Petroleums from fields in Southern Alamyshik

PERIODICAL: Referativnyy zhurnal. Khimiya, No. 1, 1962, 439-440,
abstract 1M79 (Uzb. khim. zh., no. 1, 1961, 55-64)

TEXT: Uzbekian petroleums from the field mentioned have low sulfur content, are resinous, have a paraffin base and have a composition approaching that of petroleums from paleogenic and neogenic beds in the same field. The average clear fraction content is 35%, this boils at up to 300°C; the gas oil fraction (300-400°C) is 11-12%, light oils (400-460°C) 13% and asphalt (> 460°C) 33.5%. The oils obtained are of low viscosity and require deparaffination. The solid paraffin yield (on petroleum) from fractions up to 460°C is ≤ 5.1%, and in the individual narrow fractions

Card 1/2

Petroleums from fields in...

S/081/62/000/001/046/067
B158/B101

up to 20-21%. The paraffin is medium fusible. The total solid paraffin
content is 10%. [Abstracter's note: Complete translation.]

Card 2/2

CHERNOV, M. I.

"Construction and Fleet of the Volga-Don (Lenin) Canal," Rech. transp. 12, No.4, 1952

CHERNOV,M.I., redaktor; BELYAYEV,V.D., redaktor; MAYORSKIY,G.I., redaktor;
MITAISHVILI,A.A., redaktor; DOBRONRAVOVA,S.M., redaktor; BEGICHEVA,
M.N., tekhnicheskiy redaktor

[Brief handbook on river transportation] Kratkaia spravochnaia kniga
po rechnomu transportu. Red.kollegiia: M.I.Chernov, i dr. Moskva, Izd-
vo Ministerstva rechnogo flota SSSR, 1953. 417 p.   (MIRA 9:1)
              (Inland water transportation)

CHERNOV, M.I., inzhener, laureat Stalinskoy premii.

Ports and the fleet of the Great Volga. Nauka i zhizn' 20 no.8:5-8 Ag '53.
(MIRA 6:8)
(Volga River--Harbors) (Harbors--Volga River)

CHERNOV, M.I., laureat Stalinskoi premii.

[Moscow - Rostov, great inland waterway of the U.S.S.R.] Velichaishaia v SSSR vodnotransportnaia magistral' Moskva--Rostov. Moskva, Znanie, 1954. 38 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.4, no.2)
(MLRA 7:6)
(Inland water transportation)

CHERNOV, M.I., redakter; BELYAYEV, V.D., redakter [deceased]; BUKHANOVSKIY, T.L., redakter; ZHUDRO, A.K., redakter; PETRUCHIK, V.A., redakter; SEDOV, F.G., redakter; SINITSYN, M.T., redakter; SMIRNOV, Ye.V., redakter; SOLOV'YEV, I.F., redakter; SUBBOTIN, A.P., redakter; CHERNOV, M.I., redakter; DOBRONRAVOVA, S.M., redakter, KRASNAYA, A.K., tekhnicheskiy redakter.

[Dictionary of marine and river terms] Slovar' morskikh i rech-
nykh terminov. Moskva, Izd-ve "Rechnoi transport". Vol.1. A - M
1955. 215 p.
(Russian language--Dictionaries) (Navigation--Dictionaries)
(MLRA 9:4)

CHERNOV,M.; BOGDANOV,A., inzhener

Transarctic atomic surface ship. Tekh.mol.23 no.11:20-22 N'55.
(MLRA 8:12)

1. Zamestitel' predsedatelya Nauchno-tekhnicheskogo soveta
Ministerstva rechnogo flota SSSR (for Chernov)
(Atomic ships)

CHERNOV, M.A.

BUKHANOVSKIY, I.L., redaktor; ZHUDRO, A.K., redaktor; RYABCHIKOV, P.A.,
redaktor; SEDOV, F.G., redaktor; SINITSYN, M.T., redaktor; SMIRNOV,
Ye.V., redaktor; SOLOV'YEV, I.F., redaktor; SUBBOTIN, A.P., redaktor;
CHERNOV, M.A., redaktor; DOBRONRAVOVA, S.M., redaktor izdatel'stva;
KRASNAYA, A.K., tekhnicheskiy redaktor

[Dictionary of marine and river terms] Slovar' morskikh i rechnykh
terminov. Moskva, Izd-vo "Rechnoi transport." Vol.2. N-IA. 1956.
285 p.   (MLRA 10:1)
        (Navigation--Dictionaries)

CHERNOV, M. [I.]

River ships in the sixth five-year plan. Blok.agit.vod.transp.
no.12:8-14 Je '56.   (MLRA 9:8)

1. Zamestitel' predsedatelya tekhnicheskogo soveta Ministerstva
rechnogo flota.
                        (Ships)

CHERNOV, M. I.

DANENGIRSH, Nikolay Yeselevich; CHERNOV, M.I., redaktor; ZINOV'YEVA, A.A.,
redaktor izdatel'stva; BUGICHEVA, M.N., tekhnicheskiy redaktor

[Experience in using a method of photographic modeling of pipes in
shiprepairing] Opyt primeneniia metoda fotomaketirovaniia trub v
sudoremonte. Moskva, Izd-vo "Morskoi transport," 1957. 37 p.
(Marine pipe fitting)   (MIRA 10:9)

Chernov, M.I.

GARTVIG, Vasiliy Andreyevich; YEFREMOV, G.V., retsenzent; CHERNOV, M.I., red.;
    DOBRONRAVOVA, S.M.,red.izd-va; KRASNAYA, A.K., tekhn.red.

[Along the water in wings] Po vode na kryl'iakh. Moskva, Izd-vo
    "Rechnoi transport," 1957. 77 p.   (MIRA 11:3)
        (Ships)

CHERNOV, Mikhail Ivanovich; ISLANKINA, T.F., red.; BERLOV, A.P., tekhn. red.

[New fast ships for river transportation] Novye skorostnye suda rechnogo flota. Moskva, Izd-vo "Znanie," 1958. 26 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. (MIRA 11:10) Ser.4., no.19).

(Ships) (Inland water transportation)

CHERNOV, M.I., red.; SUBBOTIN, A.P., red.; MAYORSKIY, G.I., red.;
MITAISHVILI, A.A., red.; VINOGRADOVA, N.M., red. izd-va;
YERMAKOVA, T.T., tekhn. red.

[Handbook on inland water transportation] Spravochnaia kniga po
rechnomu transportu. Izd.2., perer. i dop. Moskva, Izd-vo
"Rechnoi transport," 1958. 560 p.   (MIRA 11:8)
                    (Inland water transportation)

CHERNOV, M.I., inzh.; NAYDENKO, K.S., inzh.

Brussels World Fair. Rech.transp. 17 no.11:53-3 of cover N '58.
(MIRA 11:12)

(Brussels—Exhibitions)

FOMIN, Yuriy Yakovlevich; CHERNOV, M.I., red.; SEMENOVA, S.A., red.izd-ve;
TIKHONOVA, Ye.A., tekhn.red.

[Hydrodynamic calculation of fuel systems of marine diesels]
Gidrodinamicheskii raschet toplivnykh sistem sudovykh dizelei.
Moskva, Izd-vo "Morskoi transport," 1959. 82 p.   (MIRA 12:5)
            (Marine diesel engines)

DMITROVSKIY, Arkadiy Nikolayevich; CHERNOV, M.I., retsenzent; CHERTKOV, Kh.A., red.; KAN, P.M., red.izd-va; YERMAKOVA, T.T., tekhn.red.

[Work organization at the repair and operation bases of the fleet] Organizatsiia raboty remontno-ekspluatatsionnykh baz flota. Moskva, Izd-vo "Rechnoi transport," 1959. 100 p.

(MIRA 13:1)

(Ships--Maintenance and repair)